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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,107	10/06/2003	Sung Uk Moon	243563US90	1076

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EXAMINER	
FOTAKIS, ARISTOCRATIS	

ART UNIT	PAPER NUMBER
2611	

NOTIFICATION DATE	DELIVERY MODE
09/26/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/678,107	MOON ET AL.	
	Examiner	Art Unit	
	Aristocratis Fotakis	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after t he mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09/13/2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 2, 4 - 9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 2, 4 - 9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The indicated allowability of dependent claims 3 and 4 is withdrawn in view of the previous reference of Hsu and the newly discovered reference(s) of Takeo. Rejection(s) based on the cited reference(s) follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 – 2 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segura et al. (US 6,360,076) in view of Hsu et al.(US PG-Pub 200310054807).

Re claims 1, 2, 7, Segura discloses: a communication quality acquirer configured to acquire the communication quality (tq) from each of the plurality of mobile stations belonging to the specific multicast group (Col. 2, Lines 20-53, Fig.3). The communication quality acquirer selects the lowest communication quality (Tq-min) from among the acquired communication qualities (step 37, Fig.3); and a transmission method changer changes the transmission method in accordance with the selected lowest communication quality (step 39, Fig.3) (Col 6, Lines 12 – 67 to Col 7, Lines 1 – 25, Fig.3). However, Segura fails to disclose: a transmission method changer configured to determine a number of transmission signal repetitions by the multicast communication, in accordance with the acquired communication quality; and a transmitter configured to transmit the signal to the plurality of mobile stations using determined number of transmission signal repetitions.

Hsu discloses: a transmission method changer configured to determine a number of transmission signal repetitions by the multicast communication, in accordance with the acquired.communication quality ([0082], lines 12-14); and a transmitter configured to transmit the signal to the plurality of mobile stations using determined number of transmission signal repetitions ([0084], lines 7-9)

Because Hsu discloses his multiple transmission method allows for improving the overall frame error rate and increase the longevity of battery life ([0082], lines 1-7), it would have been obvious to one skilled in the art at the time of invention to incorporate the transmission repetition as disclosed by Hsu into the invention of Segura.

Re claim 5, Hsu further discloses a radio resource manager configured to manage radio resources of the radio station and wherein the transmission method changer determines the number of transmission signal repetitions in accordance with the acquired communication quality and the situation of a radio resource ([0082], lines 12-14).

Re claim 6, Hsu further discloses the communication quality includes at least one of a received power, a signal error rate, an interference signal level and a signal-to-interference ratio ([0082]).

Claims 4 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segura et al. (US 6,360,076) in view of Hsu et al.(US PG-Pub 200310054807) and further in view of Takeo (US 6,385,183).

Segura discloses: a communication quality acquirer configured to acquire the communication quality (tq) from each of the plurality of mobile stations belonging to the specific multicast group (Col. 2, Lines 20-53, Fig.3).

However, Segura fails to disclose: a transmission method changer configured to determine a number of transmission signal repetitions by the multicast communication, in accordance with the acquired communication quality; and a transmitter configured to transmit the signal to the plurality of mobile stations using determined number of transmission signal repetitions. Also Segura does not specifically teach of the communication quality acquirer calculating an average value of the communication qualities acquired from the plurality of mobile stations; and the transmission method changer changing the transmission method in accordance with a difference between the calculated average value and a preset reference value.

Hsu discloses: a transmission method changer configured to determine a number of transmission signal repetitions by the multicast communication, in accordance with the acquired.communication quality ([0082], lines 12-14); and a transmitter configured to

transmit the signal to the plurality of mobile stations using determined number of transmission signal repetitions ([0084], lines 7-9).

Takeo teaches of a power control system for a CDMA mobile radio communication network, powers at which downlink pilot signals are transmitted from base stations are controlled so that the numbers of mobile stations managed by the respective base stations will be in a predetermined range. In addition, powers at which uplink signals are transmitted from the mobile stations are controlled so that communication qualities related to the uplink signals received by the base stations will converge on a predetermined threshold value (Abstract). Takeo discloses of a comparator (#50, Fig.12) follows a calculator (#350 in Fig. 7) receiving the output signals of the receiver 22 (see Fig. 6) which represent the current measured values of the communication qualities SIR's related to the respective channels. The calculator computes a mean value or an average value among the current measured values of the communication qualities SIR's. The calculator informs the comparator (50) of the calculated mean value (the calculated average value) as a current measured value SIR(t). Thus, the comparator (50) receives the information of the current measured value SIR(t). The comparator (50) is connected to the memory (51). The comparator (50) receives the information of the allowable maximum value SIRmax and the allowable minimum value SIRmin from the memory (51). The device (50) compares the current measured value SIR(t) with the allowable maximum value SIRmax and the allowable minimum value SIRnin.

Because Hsu discloses his multiple transmission method allows for improving the overall frame error rate and increase the longevity of battery life ([0082], lines 1-7), it would have been obvious to one skilled in the art at the time of invention to incorporate the transmission repetition as disclosed by Hsu into the invention of Segura. Takeo provides the method of averaging the communication qualities instead of selecting the lowest communication quality. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the averaging method of Takeo for the benefit of increasing data quality and being able to control the pilot signal power.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristocratis Fotakis whose telephone number is (571) 270-1206. The examiner can normally be reached on Monday - Thursday 6:30am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AF

CHIEH M. FAN
SUPERVISORY PATENT EXAMINER